

US006472437B1

(12) United States Patent Braue, Jr. et al.

(10) Patent No.: US 6,472,437 B1 (45) Date of Patent: Oct. 29, 2002

(54)	ACTIVE TOPICAL SKIN PROTECTANTS		
(75)	Inventors:	Ernest H. Braue, Jr., Whiteford; Stephen T. Hobson, Belcamp; Erich K. Lehnert, Rosemont, all of MD (US)	
(73)	Assignee:	The United States of America as represented by the Secretary of the Army, Washington, DC (US)	
(*)	Notice:	Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 81 days.	
(21)	Appl. No.: 09/871,743		
(22)	Filed:	Jun. 1, 2001	
	Rel	ated U.S. Application Data	
(60)	Provisional application No. 60/209,337, filed on Jun. 2, 2000.		
(51)	Int. Cl. ⁷	A61K 31/02 ; A61K 31/08; A61K 47/00; A61K 7/42	
(52)			
(58)	Field of S	earch	
		514/759, 772, 789, 844, 845, 937, 939, 944	
(56)		References Cited	
	U.	S. PATENT DOCUMENTS	
	4,649,037 A	3/1987 Marsh et al 423/338	

5,607,979 A 5,914,436 A	6/1999	McCreery
5,990,373 A	11/1999	Klabunde 588/200
6,057,488 A	5/2000	Koper et al 588/200
6,224,885 B1	5/2001	Jenner 424/401

OTHER PUBLICATIONS

Smith, et al., Jrnl. of the American Acad. of Dermatology, Vo. 32, No. 5, part 1, May 1995, pp. 765–776, Sulfur mustard: Its continuing threat as a chemical warfare agent, the cutaneous lesions induced, progress in understanding its mechanism of action, its long-term health effectgs, and new developments for protection and therapy.

Arroyo, et al., Jrnl. of Pharm. and Toxicol. Methods, vol. 33, No. 2, Apr. 1995, pp. 109–112, EPR/Spin–Label Technique as an Analystical Tool for Determining the Resistance of Reactive Topical Skin Protectants (rTSPs) to the Breakthrough of Vesicant Agents.

Primary Examiner—Shelley A. Dodson (74) Attorney, Agent, or Firm—Elizabeth Arwine

(57) ABSTRACT

A topical skin protectant formulation containing a barrier cream and an active moiety for protecting warfighters and civilians against all types of harmful chemicals, specifically chemical warfare agents (CWAs). The topical skin protectant offers a barrier property and an active moiety that serves to neutralize chemical warfare agents into less toxic agents.

19 Claims, 4 Drawing Sheets